

SECTION 8

LIFE ON MILAGRA RIDGE



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8.1 PLANT LIST

Classification and nomenclature after
Hickman, et al. 1993. Updated by Peter
Warner, 7/5/00.

FAMILY/ Division	Botanical Name	Subspecies / Variety (var.)	Common Name
Division Sphenophyta			
EQUISETACEAE - Horsetail Family (2 taxa)			
	<i>Equisetum arvense</i>		common horsetail
	<i>E. telmateia</i>	<i>braunii</i>	giant horsetail
Division Pterophyta			
BLECHNACEAE -- Deer Fern Family (1 taxon)			
	<i>Woodwardia fimbriata</i>		giant chain fern
DENNSTAEDTIACEAE - Bracken Family (1 taxon)			
	<i>Pteridium aquilinum</i>	var. <i>pubescens</i>	bracken
DRYOPTERIDACEAE - Wood Fern Family (3 taxa)			
	<i>Athyrium filix-femina</i>	var. <i>cyclosorum</i>	lady fern
	<i>Dryopteris arguta</i>		wood fern
	<i>Polystichum munitum</i>		western sword fern
POLYPODIACEAE - Polypody Family (2 taxa)			
	<i>Polypodium californicum</i>		California polypody
	<i>P. scoleri</i>		leather-leaf fern
PTERIDACEAE - Brake Family (2 taxa)			
	<i>Adiantum jordanii</i>		California maiden-hair
	<i>Pentagramma triangularis</i>	<i>triangularis</i>	goldback fern
Division Coniferophyta - Cone-bearing Plants			
CUPRESSACEAE - Cypress Family (2 taxa)			
	<i>Cupressus macrocarpa</i> *		Monterey cypress
	<i>Juniperus</i> sp.*		juniper

PINACEAE - Pine Family (3 taxa)		
	<i>Pinus radiata</i> *	Monterey pine
	<i>Pinus</i> sp.	pine
	<i>Pseudotsuga menziesii</i>	Douglas-fir
Division Anthophyta - Flowering Plants		
Class Dicotyledones		
ACERACEAE -- Maple Family (1 taxon)		
	<i>Acer macrophyllum</i>	bigleaf maple
AIZOACEAE - Sea Fig Family (1 taxon)		
	<i>Carpobrotus edulis</i> *	Hottentot-fig
ANARCARDIACEAE -- Cashew or Sumac Family (1 taxon)		
	<i>Toxicodendron diversilobum</i>	poison-oak
APIACEAE - Carrot / Celery / Parsley Family (14 taxa)		
[aka UMBELLIFERAE]		
	<i>Angelica hendersonii</i>	angelica
	<i>Anthriscus caucalis</i> *	bur-chervil
	<i>Conium maculatum</i> *	poison hemlock
	<i>Daucus carota</i> *	Queen Anne's lace
	<i>D. pusillus</i>	rattlesnake weed
	<i>Foeniculum vulgare</i> *	fennel
	<i>Heracleum lanatum</i>	cow parsnip
	<i>Lomatium caruifolium</i>	hog-fennel
	<i>L. utriculatum</i>	hog-fennel
	<i>Sanicula arctopoides</i>	footsteps-of-spring
	<i>S. bipinnatifida</i>	purple sanicle; shoebutto
	<i>S. crassicaulis</i>	snakeroot
	<i>S. laciniata</i>	sanicle
	<i>Scandix pecten-veneris</i> *	shepherd's needle
APOCYNACEAE - Dogbane Family (1 taxon)		
	<i>Vinca major</i> *	periwinkle
AQUIFOLIACEAE - Holly Family (1 taxon)		
	<i>Ilex aquifolium</i> *	English holly
ARALIACEAE - Ginseng Family (1 taxon)		
	<i>Hedera helix</i> *	English ivy
ASTERACEAE - Sunflower Family (56 taxa)		
[aka COMPOSITAE]		
	<i>Achillea millefolium</i>	yarrow
	<i>Agoseris grandiflora</i>	California dandelion
	<i>Anaphalis margaritacea</i>	pearly everlasting
	<i>Artemisia californica</i>	California sagebrush
	<i>A. douglasiana</i>	mugwort
	<i>Aster chilensis</i>	aster

<i>Baccharis pilularis</i>		coyote brush
<i>Bellis perennis</i> *		English lawn daisy
<i>Carduus pycnocephalus</i> *		Italian thistle
<i>Centaurea melitensis</i> *		toalote; Napa starthistle
<i>Chamomilla suaveolens</i> *		pineapple weed
<i>Cirsium brevistylum</i>		Indian thistle; cluster this
<i>C. occidentale</i>		cobweb thistle
<i>C. quercetorum</i>		brownie thistle
<i>C. vulgare</i> *		bull thistle
<i>Conyza bonariensis</i> *		horseweed
<i>C. floribunda</i> *		horseweed
<i>Delairea odorata</i> *		Cape-ivy
<i>Erechtites minima</i> *		Australian fireweed
<i>Erigeron foliosus</i>	var. <i>franciscensis</i>	fleabane
<i>E. glaucus</i>		seaside daisy
<i>Eriophyllum staechadifolium</i>		seaside woolly sunflower
<i>Filago californica</i>		herba impia
<i>F. gallica</i> *		herba impia
<i>Gnaphalium californicum</i>		cudweed
<i>G. canescens</i>		cudweed
<i>G. luteo-album</i> *		cudweed
<i>G. purpureum</i>		cudweed
<i>G. ramossissimum</i>		cudweed
<i>Grindelia camporum</i>		gumplant
<i>G. hirsutula</i>		gumplant
<i>G. stricta</i>		gumplant
<i>Helenium puberulum</i>		rosilla, sneezeweed
<i>Hemizonia congesta</i>	<i>congesta</i>	tarweed
<i>Hypochaeris glabra</i> *		smooth cat's-ear
<i>H. radicata</i> *		rough cat's-ear
<i>Lactuca biennis</i> *		lettuce
<i>Layia hieracioides</i>		
<i>Leucanthemum vulgare</i> *		ox-eye daisy
<i>Madia gracilis</i>		tarweed
<i>M. sativa</i>		coast tarweed
<i>Microseris acuminata</i>		microseris
<i>M. bigelovii</i>		
<i>Picris echioides</i> *		bristly ox-tongue
<i>Senecio aronicoides</i>		butterweed
<i>S. vulgaris</i> *		groundsel; ragwort
<i>Silybum maritimum</i> *		milk thistle
<i>Solidago canadensis</i>	<i>elongata</i>	Canada goldenrod
<i>Soliva sessilis</i> *		soliva
<i>Sonchus asper</i> *	<i>asper</i>	prickly sow-thistle
<i>S. oleraceus</i> *		common sow-thistle
<i>Taraxacum officinale</i> *		dandelion
<i>Tragopogon porrifolius</i> *		salsify; oyster plant
<i>Uropappus lindleyi</i>		silver puffs
<i>Urospermum picroides</i> *		urospermum

	<i>Wyethia angustifolia</i>		mules' ears
BERBERIDACEAE -- Barberry Family (1 taxon)			
	<i>Berberis pinnata</i>		Oregon-grape
BETULACEAE -- Birch Family (1 taxon)			
	<i>Corylus cornuta</i>	var. <i>californica</i>	hazelnut
BORAGINACEAE - Borage Family (4 taxa)			
	<i>Amsinckia menziesii</i>	var. <i>intermedia</i>	fiddleneck
	<i>Cynoglossum grande</i>		hound's-tongue
	<i>Echium pininana</i> *		pride-of-Tenerife
	<i>Plagiobothrys nothofulvus</i>		popcorn flower
BRASSICACEAE - Mustard Family (13 taxa)			
[aka CRUCIFERAE]	<i>Arabis blepharophylla</i>		rock cress
	<i>A. glabra</i>	var. <i>glabra</i>	tower mustard
	<i>Barbarea orthoceras</i>		
	<i>Brassica rapa</i> *		field mustard
	<i>Capsella bursa-pastoris</i> *		shepherd's purse
	<i>Cardamine californica</i>		milk maids
	<i>C. oligosperma</i>		winter cress
	<i>Coronopus didymus</i> *		swine cress
	<i>Erysimum franciscanum</i>		San Francisco wallflower
	<i>Hirschfeldia incana</i> *		mustard
	<i>Lobularia maritima</i> *		sweet alyssum
	<i>Raphanus sativus</i> *		radish
	<i>Rorippa nasturtium-aquaticum</i>		watercress
CAPRIFOLIACEAE - Honeysuckle Family (5 taxa)			
	<i>Lonicera hispidula</i>	var. <i>vacillans</i>	honeysuckle
	<i>L. involucrata</i>		twinberry
	<i>Sambucus racemosa</i>	var. <i>racemosa</i>	red elderberry
	<i>Symphoricarpos albus</i>	var. <i>laevigatus</i>	snowberry
	<i>S. mollis</i>		creeping snowberry
CARYOPHYLLACEAE - Pink Family (6 taxa)			
	<i>Cerastium arvense</i>		field chickweed
	<i>C. glomeratum</i> *		mouse-ear chickweed
	<i>Polycarpon tetraphyllum</i> *		four-leaved allseed
	<i>Silene gallica</i> *		windmill pink
	<i>Spergularia rubra</i> *		sand-spurrey
	<i>Stellaria media</i> *		chickweed
CHENOPODIACEAE --Goosefoot Family (2 taxa)			
	<i>Chenopodium californicum</i>		pigweed
	<i>Chenopodium</i> sp.		pigweed
CONVOLVULACEAE - Morning-glory Family (4 taxa)			

	<i>Calystegia purpurata</i>	<i>purpurata</i>	morning-glory
	<i>C. subacaulis</i>	<i>subacaulis</i>	morning-glory
	<i>Convolvulus arvensis</i> *		field bindweed
	<i>Dichondra donelliana</i>		dichondra
CORNACEAE -- Dogwood Family (1 taxon)			
	<i>Cornus sericea</i>	<i>sericea</i>	creek dogwood
CRASSULACEAE - Stonecrop Family (6 taxa)			
	<i>Aeonium arboreum</i> *	<i>var. arboreum</i>	
	<i>Crassula argentea</i> *		jade plant
	<i>C. connata</i>		sand pygmy weed
	<i>Dudleya farinosa</i>		live-forever
	<i>Parvisedum</i> sp.		stonecrop
	<i>Sedum spathulifolium</i>		stonecrop
CUCURBITACEAE - Gourd Family (2 taxa)			
	<i>Marah fabaceus</i>		California man-root
	<i>M. oreganus</i>		coast man-root
DIPSACACEAE - Teasel Family (1 taxon)			
	<i>Scabiosa atropurpurea</i> *		pincushion flower
ERICACEAE - Heather Family (1 taxon)			
	<i>Vaccinium ovatum</i>		blue huckleberry
EUPHORBIACEAE -- Spurge Family (1 taxon)			
	<i>Euphorbia peplus</i> *		petty spurge
FABACEAE - Legume Family (32 taxa)			
[aka LEGUMINOSAE]	<i>Acacia longifolia</i> *		Sydney golden wattle
	<i>A. melanoxylon</i> *		blackwood acacia
	<i>Astragalus gambelianus</i>		milkvetch
	<i>A. nuttallii</i>	<i>var. virgatus</i>	milkvetch
	<i>Cytisus scoparius</i> *		Scotch broom
	<i>Genista monspessulana</i> *		French broom
	<i>Lathyrus cicera</i> *		pea
	<i>L. latifolius</i> *		perennial sweet pea
	<i>L. vestitus</i>		hillside pea
	<i>Lotus corniculatus</i> *		bird's-foot trefoil
	<i>L. humistratus</i>		lotus
	<i>L. micranthus</i>		lotus
	<i>L. wrangelianus</i>		lotus
	<i>Lupinus albilfrons</i>	<i>var. collinus</i>	silver lupine
	<i>L. arboreus</i>		bush lupine
	<i>L. bicolor</i>		dove lupine
	<i>L. latifolius</i>	<i>var. dudleyi</i>	lupine
	<i>L. nanus</i>		sky lupine
	<i>L. varicolor</i>		vari-colored lupine

	<i>Medicago polymorpha</i> *		bur-clover
	<i>M. sativa</i> *		alfalfa
	<i>Medicago indica</i> *		sourclover
	<i>Trifolium campestre</i> *		hop clover
	<i>T. dubium</i> *		little hop clover; shamrock
	<i>T. hirtum</i> *		rose clover
	<i>T. macraei</i>		clover
	<i>T. pratense</i> *		red clover
	<i>T. repens</i> *		white clover
	<i>T. willdenovii</i>		tomcat clover
	<i>Vicia americana</i>	var. <i>americana</i>	American vetch
	<i>V. gigantea</i>		giant vetch
	<i>V. sativa</i> *	<i>sativa</i>	spring vetch; common v
FAGACEAE - Beech Family (3 taxa)			
	<i>Quercus agrifolia</i>		coast live oak
	<i>Q. berberidifolia</i>		scrub oak
	<i>Q. chrysolepis</i>		canyon live oak
GARRYACEAE - Silktassel Family (1 taxon)			
	<i>Garrya elliptica</i>		silktassel bush
GENTIANACEAE - Gentian Family (1 taxon)			
	<i>Centaurium davyi</i>		centaury
GERANIACEAE - Geranium Family (4 taxa)			
	<i>Erodium botrys</i> *		filaree; crane's-bill
	<i>E. cicutarium</i> *		filaree; crane's-bill
	<i>Geranium dissectum</i> *		geranium
	<i>G. retrorsum</i> *		geranium
GROSSULARIACEAE -- Gooseberry Family (1 taxon)			
	<i>Ribes menziesii</i>		canyon gooseberry
HIPPOCASTANACEAE - Buckeye Family (1 taxon)			
	<i>Aesculus californica</i>		California buckeye
HYDROPHYLLACEAE - Waterleaf Family (3 taxa)			
	<i>Phacelia californica</i>		phacelia
	<i>P. distans</i>		fernleaf phacelia
	<i>P. malvifolia</i>		phacelia
LAMIACEAE - Mint Family (8 taxa)			
[aka LABIATAE]	<i>Lepechinia calycina</i>		pitcher sage
	<i>Mentha arvensis</i>		mint
	<i>M. spicata</i> *	var. <i>spicata</i>	spearmint
	<i>Monardella villosa</i>	<i>franciscana</i>	coyote-mint
	<i>Prunella vulgaris</i>	var. <i>vulgaris</i> *	self-heal
	<i>Satureja douglasii</i>		yerba buena

	<i>Stachys ajugoides</i>	var. <i>rigida</i>	hedge-nettle
	<i>S. chamissonis</i>		hedge-nettle
LINACEAE - Flax Family (1 taxon)			
	<i>Linum bienne</i> *		flax
LYTHRACEAE - Loosestrife Family (1 taxon)			
	<i>Lythrum hyssopifolium</i> *		loosestrife
MALVACEAE - Mallow Family (2 taxa)			
	<i>Malva parviflora</i> *		cheeseweed
	<i>Sidalcea malvaeflora</i>	<i>malvaeflora</i>	checker mallow
MYOPORACEAE - Myoporum Family (1 taxon)			
	<i>Myoporum laetum</i> *		
MYRICACEAE - Wax Myrtle Family (1 taxon)			
	<i>Myrica californica</i>		wax myrtle
MYRTACEAE - Myrtle Family (2 taxa)			
	<i>Eucalyptus globulus</i> *		bluegum
	<i>Leptospermum laevigatum</i> *		tea tree
OLEACEAE -- Olive Family (1 taxon)			
	<i>Olea europaea</i> *		olive
ONAGRACEAE - Evening-primrose Family (5 taxa)			
	<i>Camissonia ovata</i>		sun cups,
	<i>Clarkia rubicunda</i>		clarkia
	<i>Epilobium brachycarpum</i>		fireweed, willow herb
	<i>E. ciliatum</i>	<i>watsonii</i>	fireweed, willow herb
	<i>Fuchsia</i> sp.*		ornamental fuchsia
OROBANCHACEAE -- Broom-rape Family (1 taxon)			
	<i>Orobanche</i> sp.		broom-rape
OXALIDACEAE - Oxalis Family (3 taxa)			
	<i>Oxalis albicans</i>	<i>pilosa</i>	oxalis
	<i>O. corniculata</i> *		
	<i>O. pes-caprae</i> *		Bermuda-buttercup
PAPAVERACEAE - Poppy Family (2 taxa)			
	<i>Eschscholzia californica</i>		California poppy
	<i>Platystemon californicus</i>		cream cups
PITTOSPORACEAE - Pittosporum Family (2 taxa)			
	<i>Pittosporum crassifolium</i> *		pittosporum
	<i>P. undulatum</i> *		Victorian box; mock oran

PLANTAGINACEAE - Plantain Family (3 taxa)		
<i>Plantago coronopus</i> *		plantain
<i>P. erecta</i>		dwarf plantain
<i>P. lanceolata</i> *		English plantain
POLEMONIACEAE - Phlox Family (2 taxa)		
<i>Navarretia squarrosa</i>		skunkweed
<i>Phlox gracilis</i>		phlox
POLYGONACEAE - Knotweed Family (6 taxa)		
<i>Eriogonum latifolium</i>		coast buckwheat
<i>Polygonum arenastrum</i> *		prostrate knotweed
<i>P. punctatum</i>		smartweed
<i>Rumex acetosella</i> *		sheep sorrel
<i>R. conglomeratus</i> *		dock
<i>R. crispus</i> *		curly dock
PORTULACACEAE - Purslane Family (2 taxa)		
<i>Calandrinia ciliata</i>		red maids
<i>Claytonia perfoliata</i>		miner's-lettuce
PRIMULACEAE - Primrose Family (2 taxa)		
<i>Anagallis arvensis</i> *		scarlet pimpernel
<i>Dodecatheon hendersonii</i>		shooting star
RANUNCULACEAE - Buttercup Family (5 taxa)		
<i>Aquilegia formosa</i>		columbine
<i>Delphinium californicum</i>		larkspur
<i>D. decorum</i>		larkspur
<i>Ranunculus aquatilis</i>	var. <i>subrigidus</i>	buttercup
<i>R. californicus</i>		California buttercup
RHAMNACEAE - Buckthorn Family (2 taxa)		
<i>Rhamnus californica</i>		California coffeeberry
<i>R. crocea</i>		redberry
ROSACEAE - Rose Family (22 taxa)		
<i>Acaena pinnatifida</i>	var. <i>californica</i>	
<i>Aphanes occidentalis</i>		
<i>Cotoneaster franchetii</i> *		cotoneaster
<i>C. lacteus</i> *		cotoneaster
<i>C. pannosa</i> *		feltleaf cotoneaster
<i>Cotoneaster</i> sp.*		cotoneaster
<i>Crataegus monogyna</i> *		hawthorn
<i>Fragaria chiloensis</i>		beach strawberry
<i>F. vesca</i>		wood strawberry
<i>Heteromeles arbutifolia</i>		toyon
<i>Holodiscus discolor</i>		ocean spray
<i>Horkelia californica</i>		horkelia

<i>Oemleria cerasiformis</i>		oso berry
<i>Potentilla anserina</i>	<i>pacifica</i>	silverweed; silver beach
<i>P. glandulosa</i>	<i>glandulosa</i>	cinquefoil
<i>Prunus ilicifolia</i>		hollyleaf cherry
<i>Pyracantha angustifolia</i> *		firethorn
<i>Rosa gymnocarpa</i>		California wild rose
<i>R. eglanteria</i> *		sweet-brier
<i>Rubus discolor</i> *		Himalayan blackberry
<i>R. parviflorus</i>		thimbleberry
<i>R. ursinus</i>		California blackberry
RUBIACEAE - Madder Family (4 taxa)		
<i>Galium aparine</i>		bedstraw; goosegrass
<i>G. californicum</i>		bedstraw; cleavers
<i>G. porrigens</i>		bedstraw
<i>Sherardia arvensis</i> *		field madder
SALICACEAE - Willow Family (2 taxa)		
<i>Salix lasiolepis</i>		arroyo willow
<i>S. sitchensis</i>		Sitka willow
SAXIFRAGACEAE -- Saxifrage Family (4 taxa)		
<i>Heuchera micrantha</i>		alum root
<i>Lithophragma affine</i>		woodland star
<i>Saxifraga californica</i>		saxifrage
<i>Tellima grandiflora</i>		fringe cups
SCROPHULARIACEAE - Figwort Family (12 taxa)		
<i>Bellardia trixago</i> *		bellardia
<i>Castilleja affinis</i>		paintbrush
<i>C. exserta</i>		purple owl's-clover
<i>C. latifolia</i>		paintbrush
<i>C. wightii</i>		paintbrush
<i>Collinsia multicolor</i>		collinsia
<i>Kickxia elatine</i> *		fluellin
<i>Mimulus aurantiacus</i>		sticky monkeyflower
<i>M. guttatus</i>		seep monkeyflower
<i>Parentucella viscosa</i> *		
<i>Scrophularia californica</i>	<i>californica</i>	figwort; bee plant
<i>Triphysaria pusilla</i>		dwarf owl's-clover
SOLANACEAE -- Nightshade Family (2 taxa)		
<i>Solanum douglasii</i>		nightshade
<i>S. umbelliferum</i>		nightshade
URTICACEAE - Nettle Family (1 taxon)		
<i>Urtica dioica</i>	<i>holosericea</i>	stinging nettle
VALERIANACEAE - Valerian Family (1 taxon)		

	<i>Plectritis brachystemon</i>		plectritis
Class Monocotyledones			
ARACEAE -- Arum Family (2 taxa)			
	<i>Arum italicum</i> *		Italian arum
	<i>Zantedeschia aethiopica</i> *		calla lily
CYPERACEAE - Sedge Family (5+ taxa)			
	<i>Carex dudleyi</i>		sedge
	<i>C. tumulicola</i>		sedge
	<i>Carex</i> spp.		sedge
	<i>Cyperus eragrostis</i>		nut-sedge
	<i>Eleocharis macrostachya</i>		
	<i>Scirpus californicus</i>		bulrush
IRIDACEAE - Iris Family (3 taxa)			
	<i>Crocodymia crocosmiiflora</i> *		montbretia
	<i>Iris douglasiana</i>		Douglas's iris
	<i>Sisyrinchium bellum</i>		blue-eyed grass
JUNCACEAE - Rush Family (6 taxa)			
	<i>Juncus bolanderi</i>		rush
	<i>J. bufonius</i>	var. <i>bufonius</i>	toad rush
	<i>J. effusus</i>		
	<i>J. falcatus</i>	var. <i>falcatus</i>	rush
	<i>J. patens</i>		
	<i>Luzula comosa</i>		wood rush
LILIACEAE - Lily Family (10 taxa)			
	<i>Allium acuminatum</i>		Hooker's onion
	<i>A. triquetrum</i> *		
	<i>Amaryllis belladonna</i> *		naked lady
	<i>Calochortus albus</i>		Mariposa tulip
	<i>Chlorogalum pomeridianum</i>		soap plant
	<i>Dichelostemma capitatum</i>	capitatum	blue dicks
	<i>Fritillaria affinis</i>		checker lily
	<i>Smilacina stellata</i>		false Solomon's-seal
	<i>Trillium chloropetalum</i>		giant trillium
	<i>Triteleia laxa</i>		lithurief's spear
ORCHIDACEAE - Orchid Family (2 taxa)			
	<i>Epipactis helleborine</i> *		orchid
	<i>Piperia elegans</i>		piperia; rein orchid
POACEAE - Grass Family (47 taxa)			
[aka GRAMINAE]			
	<i>Agrostis capillaris</i> *		colonial bentgrass
	<i>A. pallens</i>		bentgrass
	<i>Aira caryophyllea</i> *		silver European hairgrass
	<i>Avena barbata</i> *		wild oats

<i>Brachypodium distachyon</i> *		
<i>Briza maxima</i> *		rattlesnake grass
<i>B. minor</i> *		quaking grass
<i>Bromus carinatus</i>	var. <i>carinatus</i>	California brome
<i>B. carinatus</i>	var. <i>maritimus</i>	California brome
<i>B. diandrus</i> *		ripgut brome
<i>B. hordeaceus</i> *		soft chess
<i>B. madritensis</i> *	<i>rubens</i>	red brome
<i>B. madritensis</i> *	<i>madritensis</i>	foxtail chess
<i>Calamagrostis stricta</i>	<i>inexpansa</i>	reedgrass
<i>Cortaderia jubata</i> *		Andean plumegrass
<i>C. selloana</i> *		pampas grass
<i>Dactylis glomerata</i> *		orchard grass
<i>Danthonia californica</i>	var. <i>californica</i>	California oatgrass
<i>D. californica</i>	var. <i>americana</i>	Calif. Oatgrass
<i>Elymus glaucus</i>	<i>glaucus</i>	blue wildrye
<i>Festuca arundinacea</i> *		tall fescue
<i>F. californica</i>		California fescue
<i>F. rubra</i>		red fescue
<i>Gastridium ventricosum</i> *		nit grass
<i>Holcus lanatus</i> *		purple velvet grass
<i>Hordeum brachyantherum</i> *		barley
<i>H. marinum</i> *	<i>gussoneanum</i>	Mediterranean barley
<i>H. murinum</i> *	<i>leporinum</i>	foxtail barley
<i>Koeleria macrantha</i>		junegrass
<i>Leymus triticoides</i>		
<i>Lolium multiflorum</i> *		Italian ryegrass
<i>L. perenne</i> *		perennial ryegrass
<i>Melica californica</i>		California melic
<i>M. imperfecta</i>		melic
<i>M. torreyana</i>		melic
<i>Nassella lepida</i>		needlegrass
<i>N. pulchra</i>		purple needlegrass
<i>Paspalum dilatatum</i> *		dallis grass
<i>Phalaris aquatica</i> *		Harding grass
<i>Poa annua</i> *		annual bluegrass
<i>P. secunda</i>	<i>secunda</i>	one-sided bluegrass
<i>P. unilateralis</i>		ocean bluff bluegrass
<i>Polypogon australis</i> *		Chilean beard grass
<i>P. maritimus</i> *		Mediterranean beard gra
<i>Triticum aestivum</i> *		wheat
<i>Vulpia bromoides</i> *		
<i>V. myuros</i> *		rattail fescue
TYPHACEAE -- Cattail Family (1 taxon)		
<i>Typha angustifolia</i>		cattail

8.2 MILAGRA RIDGE BUTTERFLY LIST

observed by Robert Langston 1985-1991, 1993-1994

Hesperiidae: True Skippers

Polites sabuleti, Sandhill skipper
Hylephila phyleus, Fiery skipper
Pyrgus communis, Common checkered skipper
Poanes melane, Umber skipper
Ochlodes sylvanoides, Woodland skipper

Papilionidae: Swallowtails

Papilio eurymedon, Pale swallowtail
Papilio rutulus, Western tiger swallowtail
Papilio zelicaon, Anise swallowtail

Pieridae: Whites and Sulfers

Euchloe ausonides, Large marble
Colias eurytheme, Orange sulfur
Phoebis agarithe, Large orange sulfur
Pontia protodice, Checkered white
Anthocharis sara, Sara orange-tip
Pieris rapae, Cabbage white

Satyridae: Satyrs and Wood Nymphs

Coenonympha tullia, Common ringlet

Danaidae: Milkweed Butterflies

Danaus plexippus, Monarch

Lycaenidae: Gossamer-winged Butterflies

Callophrys dumetorum, Green hairstreak
Celastrina ladon echo, Echo blue (spring azure)
Icaricia acmon, Acmon blue
Icaricia icarioides missionensis, Mission blue
Strymon melinus pudicus, Common hair-streak
Lycaena xanthoides, Great copper

Callophrys mossii bayensis, San Bruno elfin

Nymphalidae: Brushfooted Butterflies

Phyciodes pratensis, Field crescent
Phyciodes mylitta, Mylitta crescent
Junonia coenia, Buckeye
Vanessa annabella, West coast lady
Vanessa atalanta rubria, Red admiral
Vanessa cardui, Painted Lady
Vanessa virginiensis, American painted lady
Nymphalis californica, California tortoise shell

8.3 ENDANGERED SPECIES OF MILAGRA RIDGE

Mission Blue Butterfly (*Icaricia icarioides missionensis*)

Status

Endangered

Description

On the upperside of the wings, the adult female is brown with some blue, and the male is light blue. Both have blackish wing edges. The underside of the wings is off-white with two rows of irregularly shaped black spots. The larva (caterpillar) is light green with diagonal white bars on each segment.

Size

Adults are about the size of a quarter (21 to 33 mm). Larvae are very small and rarely seen.

Habitat

The Mission blue requires a host plant and

appropriate nectar plants in a coastal grassland habitat. The host plants utilized by the Mission blue are silver lupine (*Lupinus albifrons*), summer lupine (*Lupinus formosus*), and varicolor lupine (*Lupinus variicolor*). Nectar plants include various composites (Asteraceae) that grow in association with the lupines.

Range

Remaining populations of Mission blue butterfly are found in only a few locations around the San Francisco Bay area in California: the Marin Headlands (Marin County), the Skyline Ridges (San Mateo County), San Bruno Mountain (San Mateo County), and possibly at Twin Peaks (San Francisco County). The historical distribution of the species probably encompassed much of the coastal scrub/grassland habitat of the northern San Francisco peninsula and Marin County.

Life Cycle

The eggs are usually laid singly on the dorsal side of new lupine leaves, but may also be laid on stems, flowers, and seed pods of the lupine. Eggs hatch within six to ten days, and the first and second instar larvae feed on the mesophyll of the host plant. Approximately three weeks after eclosion, the second instar larvae begin diapause, usually in the litter at the base of the host plant. **Diapause** begins at about the same time that the host lupine shifts its energy from leaf maintenance to flower and seed production. Larvae remain in diapause for the rest of the summer and through the winter, and emerge to continue feeding in the spring. **Pupation**, which lasts about a week, occurs in the duff at the base of the host plant or other plants. The adult flight period lasts from March to June. Adults live for approximately one week, and females lay eggs on the host plant. The complete life cycle of the Mission blue lasts one year.

Food Source

Mission blue larvae will feed only on the leaves of the three host lupines: *L. albifrons*, *L. formosus*, and *L. variicolor*. Adults may drink the nectar of composite flowers (sunflower family) using a long tube called a proboscis that extends from the underside of the head.

Population

The San Bruno Mountain population is estimated at 18,000 adults. The Skyline Ridges support approximately 2,000 adults, and there may be as many as 500 at Twin Peaks. The Marin Headlands population has not been estimated, but is significant.

Behavior

Mission blue larvae spend most of their time feeding on lupine leaves in a variety of weather conditions. Adults spend their short lives mating, laying eggs, and nectaring. To locate a mate, adults patrol in patches of host plant, rarely straying far from the lupine habitat. On rainy, cool, windy, or foggy days, adults hide out underneath vegetation.

Survival Threats

The main threat to the Mission blue is habitat loss due to agricultural and urban expansion. Various parasites and predators threaten the Mission blue during its life cycle. Eggs and larvae are parasitized by other insects, such as wasps and flies. Rodents prey upon both larvae and pupae, and many pupae die due to desiccation. Invasive exotic plant species, such as ice plant, pampas grass, broom, gorse, and eucalyptus, also threaten habitat. Trampling of host plants, larvae, and pupae by humans and dogs is also a problem in some areas.

Legal Protection

The Mission blue was added to the Federal Endangered Species List in 1976, and is protected under the **Endangered Species Act**.

References

Arnold, Richard A. 1983. Ecological Studies of Six Endangered Butterflies (*Lepidoptera*, *Lycaenidae*): Island biogeography, patch dynamics, and the design of habitat preserves. UC Publications in Entomology, Volume 99. UC Press.

Cushman, J. Hall 1993. The Mission Blue, *Plebejus icarioides missionensis* Hovanitz. In *Conservation Biology of Lycaenidae (Butterflies)*, ed. T.R. New. International Union for Conservation of Nature and Natural Resources, Gland, Switzerland.

San Bruno Elfin Butterfly (*Callophrys mossii bayensis*)

Status

Endangered

Description

The San Bruno elfin is brown on the upperside, and reddish brown on the underside with a whitish, irregular median line (both sexes). The larvae (caterpillars) are bright red or bright yellow.

Size

Adults are 20 to 24 mm (a bit smaller than the Mission blue). Larvae are very small, but easily spotted due to their bright coloring.

Habitat

The elfin occurs only on north-facing slopes within the fogbelt where its host plant, stonecrop (*Sedum spathulifolium*) grows. Stonecrop grows in coastal grassland and low scrub on thin, rocky soils.

Range

Remaining populations of San Bruno elfin butterfly are found in only three locations around the San Francisco Bay area in California: Milagra Ridge (San Mateo County), San Bruno Mountain (San Mateo

County), and Montara Mountain (San Mateo County). Though the elfin has always been a sparse population due to the limited range of its host plant, the historical distribution of the species probably included Twin Peaks and Mount Davidson (San Francisco County).

Life Cycle

Females oviposit on the ventral surface of stonecrop from February to early April. The red or yellow larvae hatch in five to seven days and feed on *Sedum* leaves in the first and second instar. Third instar larvae begin to feed on the flower heads of the *Sedum* in May, and continue to do so in the fourth instar. The fourth instar pupates at the base of the hostplant, and the pupa enters a diapause, which lasts through the summer, fall, and early winter. Adults emerge February to early April and live for about a week, mating and laying eggs on the host plant.

Food Source

Elfin larvae will feed only on the leaves of the host plant, *Sedum spathulifolium*. Adults may drink the nectar of early-blooming coastal flowers, especially hog fennel (*Lomatium utriculatum*), using a long tube called a proboscis that extends from the underside of the head.

Population

The San Bruno Mountain population is estimated at 1,000 or more adults within 15 subpopulations. Montara Mountain supports about 10 subpopulations, and Milagra Ridge supports about four.

Behavior

First and second instar larvae spend most of their time feeding on stonecrop leaves, while the third and fourth instars feed on stonecrop flowers. Larvae are active in all weather conditions. Adults spend their short lives mating, laying eggs, and nectaring. To locate a mate, adult males perch in the vicinity of the host plant, fly-

ing out to investigate passing insects. Females spend even less time in flight than males. Adults rarely stray far from the Sedum habitat. On rainy, cool, windy, or foggy days, adults hide out underneath vegetation.

Survival Threats

The habitat of the San Bruno elfin has been reduced due to urbanization in some areas, though the remainder of the habitat is protected as County, State, and National Parks. Other land uses, such as quarrying on San Bruno Mountain and possible road construction on Montara Mountain, may destroy or disturb habitat. The invasive exotic plant species, such as ice plant, pampas grass, broom, gorse, and eucalyptus, also threaten habitat. Parasitization of larvae by a Tachinid fly occurs at a rate of 50 to 80 percent, and rodents may eat both larvae and pupae.

Legal Protection

The San Bruno elfin was added to the Federal Endangered Species List in 1976, and is protected under the Endangered Species Act.

Reference

Weiss, Stuart B. 1993. The San Bruno Elfin, *Incisalia mossii bayensis* (Brown). In *Conservation Biology of Lycaenidae (Butterflies)*, ed. T.R. New. International Union for Conservation of Nature and Natural Resources, Gland, Switzerland.

California Red-legged Frog (*Rana aurora draytonii*)

Status

Threatened.

Description

The abdomen and hind legs of adults are red; the backs are characterized by small black flecks and larger irregular dark

blotches with indistinct outlines on a brown, gray, olive, or reddish background color. Dorsal spots usually have light centers. Skin folds across the back are common. In their tadpole stage, the frogs are dark brown and yellow with darker spots.

Size

At up to five inches long, the California red-legged frog is one of the West's largest native frogs. Females grow larger than males. The larvae range from 0.6 to 3.1 inches.

Habitat

Adult frogs require dense, shrubby or emergent riparian vegetation closely associated with deep still- or slow-moving waters. During winter, well-vegetated areas along these river corridors are needed for shelter.

Range

Remaining populations of the red-legged frog are found mostly in three California counties: Monterey, Santa Barbara, and San Luis Obispo. The frog's historical range extended from the vicinity of Point Reyes National Seashore, Marin County, California, coastally, and from the vicinity of Redding, Shasta County, California, inland south to northwestern Baja California, Mexico.

Life Cycle

Eggs are laid, which hatch in six to fourteen days. Larvae (tadpoles) undergo metamorphosis in three and one-half to seven months. Sexual maturity is attained at around three to four years of age. California red-legged frogs may live eight to ten years.

Food Source

The diet of California red-legged frogs is extremely variable. Invertebrates, small tree frogs and mammals are eaten by adults, while larvae are thought to feed on algae.

Population

In the past, over 80,000 red-legged frogs were harvested annually for their legs. Currently, while exact numbers are unknown, only three localities are known to support substantial (over 350) populations of adult frogs.

Voice

California red-legged frogs have paired vocal sacks, and usually call into the air.

Behavior

In general, adult frogs are quite wary. Highly nocturnal, they come under attack from wading birds. Adult frogs seem to use vibrations transmitted along the vegetation on which they are sitting to detect the approach of certain other predators, such as raccoons. They also sometimes fall prey to San Francisco garter snakes and two-striped garter snakes, with whom they share certain habitat. During periods of flooding, California red-legged frogs have been observed concealed in small pockets or mammal burrows along river banks, stabilized by shrubby riparian growth.

Reproduction

California red-legged frogs breed early in the year, from late November to late April. Males appear at breeding sites typically two to four weeks ahead of females, and call in small mobile groups of between three and seven to attract females. Egg masses containing between 2,000 and 5,000 small (0.1 inch in diameter), dark, reddish-brown eggs are attached to vegetation in or near the water, such as bulrushes or cattails.

Survival Threats

Bullfrogs, introduced to supply frog legs for restaurants in the face of declining numbers of the California red-legged frog, eat their eggs, and replace them in their habitat. Clearing of creek-bed vegetation and the creation of concrete banks threat-

ens the frog's breeding habitats, as well as other forms of water-diversion associated with development.

Legal Protection

Endangered Species Act; Species of special concern in the state of California.

**San Francisco Garter Snake
(*Thamnophis sirtalis tetrataenia*)****Status**

Endangered.

Description

One of the most beautiful serpents in North America. Wide dorsal stripe of greenish-yellow, edged with black, bordered on each side by a broad red stripe bordered by a black one. Belly is greenish-blue, and the top of the head is red. Relatively large eyes.

Size

Adults range from one and one-half to three feet long, and are slender.

Habitat

Ponds, marshes, roadside ditches, streams, meadows, city lots. Tends to stay near water.

Range

Western portion of the San Francisco peninsula, from around the San Francisco County line south along crest of hills at least to Crystal Lake, and along coast to point Ano Nuevo, San Mateo County, California.

Food Source

Food consists of fish, toads, frogs, tadpoles, salamanders, birds, small mammals, earthworms, slugs, and leeches.

Behavior

Tends to stay near water, entering it when frightened. A spirited snake, it defends itself energetically when captured. When

caught, it often bites and smears its captor with excrement and odorous contents of its anal scent glands. The young are born live, in broods that average around one or two dozen.

Survival Threats

Encroaching development in their habitat, and underwater channeling of water

sources, threaten the San Francisco garter snake.

Legal Protection

Endangered Species Act.

Reference

Defenders of Wildlife at www.defendersofwildlife.org